

ABSTRACT OF THE INVENTION

A method of growing a crystal on a substrate disposed in a reactor, that provides a reactor chamber in which the substrate is disposed, includes flowing reactive gases inside the reactor chamber toward the substrate, the reactive gases comprising components that are able to bond to each other to form the crystal, and flowing buffer gas in the reactor chamber between the reactive gases and a wall of the reactor, where the flowing buffer gas inhibits at least one of a first material at least one of in and produced by the reactive gases from reaching the reactor wall and a second material produced by the reactor wall from reaching the reactive gases in the reactor chamber before the reactive gases reach the substrate.

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